11‑2 (*Key Question*) Compare the elasticity of the monopolistically competitor’s demand curve with that of a pure competitor and a pure monopolist. Assuming identical long‑run costs, compare graphically the prices and output that would result in the long run under pure competition and under monopolistic competition. Contrast the two market structures in terms of productive and allocative efficiency. Explain: “Monopolistically competitive industries are characterized by too many firms, each of which produces too little.”

**The monopolistic competitor’s demand curve is less elastic than a pure competitor and more elastic than a pure monopolist. Your graphs should look like Figures 11.12 and 11.1 in the chapters. Price is higher and output lower for the monopolistic competitor. Pure competition: *P* = MC (allocative efficiency); *P* = minimum ATC (productive efficiency). Monopolistic competition: *P* > MC (allocative efficiency) and *P* > minimum ATC (productive inefficiency). Monopolistic competitors have excess capacity; meaning that fewer firms operating at capacity (where *P* = minimum ATC) could supply the industry outp**

11‑3 “Monopolistic competition is monopoly up to the point at which consumers become willing to buy close‑substitute products and competitive beyond that point.” Explain.

**As long as consumers prefer one product over another regardless of relative prices, the seller of the product is a monopolist. But in monopolistic competition this happy state is limited because there are many other firms producing similar products. When one firm’s prices get “too high” (as viewed by consumers), people will switch brands. At this point, our firm has entered the competitive zone unwillingly, which is why monopolistically competitive firms are forever trying to find ways to differentiate their products more thoroughly and thus to gain more monopoly price‑setting power.**

11‑4 “Competition in quality and in service may be just as effective as price competition in giving buyers more for their money.” Do you agree? Why? Explain why monopolistically competitive firms frequently prefer nonprice to price competition.

**This can certainly be true. It depends on how much consumers value quality and service, and are willing to pay for it through higher product prices. In a monopolistically competitive market the consumer can buy a substitute brand for a lower price, if the consumer prefers a lower price to better quality and service.**

**The monopolistically competitive firm frequently prefers nonprice competition to price competition, because the latter can lead to the firm producing where *P* = ATC and thus making no economic profit or, worse, producing in the short run where *P* < ATC and thus losing money, with the possibility of eventually going out of business.**

**Nonprice competition, on the other hand, if successful, results in more monopoly power: The firm’s product has become more differentiated from now less-similar competitors in the industry. This increase in monopoly power allows the firm to raise its price with less fear of losing customers. Of course, the firm must still follow the MR = MC rule, but its success in nonprice competition has shifted both the demand and MR curves upward to the right. This results in simultaneously a larger output, a higher price, and more economic profits.**

11‑5 Critically evaluate and explain:

a. In monopolistically competitive industries, economic profits are competed away in the long run; hence, there is no valid reason to criticize the performance and efficiency of such industries.

b. In the long run, monopolistic competition leads to a monopolistic price but not to monopolistic profits.

(a). The first part of the statement may well be true, but it does not lead logically to the second part. The criticism of monopolistic competition is not related to the profit level but to the fact that the firms do not produce at the point of minimum ATC and do not equate price and MC. This is the inevitable consequence of imperfect competition and its downward sloping demand curves. With *P* > minimum ATC, productive efficiency is not attained. The firm is producing too little at too high a cost; it is wasting some of its productive capacity. With *P* > MC, the firm is not allocating resources in accordance with society’s desires; the value society sets on the product (P) is greater than the cost of producing the last item (MC).

(b) The statement is often true, since competition of close substitutes tends to compete price of the average firm down to equality with ATC. Thus, there is no economic profit. However, the firm is producing where its (moderately) monopolistically downward‑sloping demand curve is tangent to the ATC curve, short of the point of minimum ATC and thus at a higher than purely competitive price. In other words, it is at a “monopolistic” price.

11-6 Why do oligopolies exist? List five or six oligopolists whose products you own or regularly purchase. What distinguishes oligopoly from monopolistic competition?

**Oligopolies exist for several reasons, the most common probably being economies of scale. If these are substantial, as they are in the automobile industry, for example, only very large firms can produce at minimum average cost. This makes it virtually impossible for new firms to enter the industry. A small firm could not produce at minimum cost and would soon be competed out of the business; yet to start at the required very large scale would take far more money than an unestablished firm is likely to be able to raise before proving it will be profitable.**

**Other barriers to entry include ownership of patents by the oligopolists and, possibly, massive advertising that gives would-be newcomers no chance to establish a presence in the public’s mind. Finally, there is the urge to merge. Mergers have the clear advantage of reducing competition—of giving the emerging oligopolists more monopoly power. Also, they may result in more economies of scale and thereby increase that barrier to new entry.**

**Oligopolies with which we deal include manufacturers of automobiles, ovens, refrigerators, personal computers, gasoline, and courier services.**

**Oligopoly is distinguished from monopolistic competition by being composed of few firms (not many); by being mutually interdependent with regard to price (instead of control within narrow limits); by having differentiated or homogeneous products (not all differentiated); and by having significant obstacles to entry (not easy entry). Both engage in much nonprice competition.**

11A-1 Is the game shown by Figure 11.3 in the chapter (not this appendix) a zero-sum game or is it a positive-sum game? How can you tell? Are there dominant strategies in this game? If so, what are they? What cell represents a Nash equilibrium and why? Explain why it is so difficult for Uptown and RareAir to achieve and maintain a more favorable cell than the Nash equilibrium in this single-period pricing game.

**This is a positive-sum game since the sum of the payoffs for each firm is positive. Yes, the dominant strategy is for both firms to use a low price strategy. This strategy will provide the highest payoff regardless of what the other firm does. The Nash equilibrium is for both firms to play the low price strategy (low-low cell) since neither firm has an incentive to deviate from this strategy given the strategy of the competing firm.**

**The more favorable outcome would be for both firms to collude and use the high price strategy. Both firms would earn a profit of $12 rather than $8 in this case. The problem is that both firms have an incentive to deviate from this strategy given that the other firm is playing the high price strategy. By pricing low, given the other firm is pricing high, profits increase to $15 (rather than $12 through cooperation).**

11A-2 Refer to the payoff matrix in question 8 at the end of this chapter. First, assume this is a one-time game. Explain how the $60/$57 outcome might be achieved through a credible threat. Next, assume this is a repeated game (rather than a one-time game) and that the interaction between the two firms occurs indefinitely. Why might collusion with a credible threat not be necessary to achieve the $60/$57 outcome?

**Either firm could threaten to flood the market to induce the other firm to choose the $40 pricing strategy. This threat is likely to be credible since both firms benefit from the $40 pricing strategy. In a repeated game setting this threat may not be necessary since the present value of cooperation may exceed the one time gains from deviating from the $40-$40 pricing strategy. Thus, each firm may have incentive not to deviate from the $40-$40 strategy out of fear of lower profits in the future.**

11A-3 Refer to the payoff matrix below.

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**Assuming this is a sequential game with no collusion, what is the outcome if Firm A moves first to build a new type of commercial aircraft? Explain why first-mover strategies in the real world are only as good as the profit projections on which they are based. How could a supposed “win” from moving first turn out to be a big loss, whereas the “loss” of being preempted turn out to be a blessing in disguise?**

**The dominant strategy for firm B is to build. The payoff from this build-strategy is greater than the alternative not to build, regardless of what firm A does. Since firm A will recognize this strategy, they will choose not to build, thus minimizing their losses. Thus, even as a first mover firm A will choose not to build.**

**A ‘win’ for firm B may not materialize if the projections about profits are incorrect. For example, if there is a global downturn that reduces the demand for aircraft and firm B has already built the aircraft, then this may result in a loss for firm B.**